



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/659,750

09/11/2003

Min-Hwan Woo

031073

3471

23850

7590

05/03/2007

ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP  
1725 K STREET, NW  
SUITE 1000  
WASHINGTON, DC 20006

EXAMINER

MILORD, MARCEAU

ART UNIT

PAPER NUMBER

2618

MAIL DATE

DELIVERY MODE

05/03/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/659,750

Applicant(s)

WOO ET AL.

Examiner

Marceau Milord

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-4, 17-22 and 27 is/are rejected.
- 7) ☒ Claim(s) 5-16 and 23-26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 17-22, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinzalow et al (US Patent No 6052603) in view of Sadler (US Patent No 6058319).

Regarding claims 1-2, Kinzalow et al discloses a stereophonic apparatus (figs. 7-10), comprising: an audio signal (412 of fig. 8) generating unit for generating an audio signal (col. 1, lines 53-65; col. 11, lines 54-60); a sound signal (472 of fig. 8) controlling unit for outputting a sound signal to a sound signal input terminal of an external sound apparatus and controlling path of a sound signal output from a sound signal output terminal of said external sound apparatus (col. 2, lines 22-59; col. 11, line 61-col. 12, line 34) ; a mixing unit for generating a mixed sound signal by mixing an audio signal input from said audio signal generating unit and a sound signal input through said sound signal controlling unit (col. 12, line 42- col. 13, line 9; col. 13, line 49-col. 14, line 23).

Art Unit: 2618

However, Kinzalow et al does not specifically disclose an audio amplifying unit for amplifying a mixed sound signal input from said mixing unit; and an output unit for outputting a mixed sound signal amplified by said audio amplifying unit; wherein said audio signal generating unit includes at least one of a radio receiving unit which generates an audio signal by receiving a radio signal and a media playing unit which generates an audio signal by playing media.

On the other hand, Sadler, from the same field of endeavor, discloses a mobile radiotelephone system that includes a hands free kit, which allows the audio signal to be output through a car stereo system. The mobile radiotelephone system includes a hand held unit, a cassette adapter, and a coupling unit. The hand held unit is a fully functional mobile telephone including a receiver and transmitter capable of transmitting and receiving voice and data signals. The cassette adapter is configured to load into a cassette player of a car stereo system. The cassette adapter includes a record head for contacting a playback head in the cassette player when the cassette adapter is loaded into the cassette player. A coupling unit attached to the hand held unit and includes a coupling circuit for electrical connecting the cassette adapter to the hand held unit. When the cassette adapter is coupled to the hand held unit, audio signals are output from hand held unit to the cassette adapter and picked up by the cassette player (col. 1, lines 45-64; col. 3, lines 24-65; col. 5, lines 10-43). Furthermore, the coupling circuit electrically connects the cassette adapter and external microphone to the mobile unit. The coupling circuit includes an input amplifier to amplify the input from the external microphone, an output amplifier to amplify the output from the mobile unit, and a detection circuit to detect when the cassette adapter is connected to the coupling circuit. An audio device, such as CD player may be plugged into the

Art Unit: 2618

auxiliary input. In addition, the cradle adapter would include a switching circuit to select the audio signal, which is output through jack to the cassette adapter (col. 4, lines 13-20; col. 6, lines 7-40). It is considered that the audio signal which includes a radio receiving unit which converts radio signals to audio signal and a media playing unit which generates audio signal by playing media. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to apply the technique of Sadler to the communication system of Kinzalow in order to provide a separate amplifier and speaker as part of the hands-free kit and a cassette adapter that allows audio signals to be output via a car stereo system.

Regarding claim 3, Kinzalow et al as modified discloses a stereophonic apparatus (figs. 7-10), wherein said sound signal output from said sound signal output terminal of said external sound apparatus is an amplified signal in said external sound apparatus (col. 2, lines 18-49; col. 11, line 54- col. 12, line 17).

Regarding claim 4, Kinzalow et al as modified discloses a stereophonic apparatus (figs. 7-10), wherein said external sound apparatus is a mobile phone (col. 6, lines 9-21; col. 11, lines 1-13).

Regarding claims 17-18, 27, Kinzalow et al discloses an apparatus for controlling sound signal (figs. 7-10), coupled to a stereophonic apparatus and a mobile phone (312 of fig. 7), comprising; a microphone unit (368 of fig. 7), having one end connected to a sound signal input terminal of said mobile phone and other end grounded, which converts a voice signal into a sound signal and transmits it said sound signal input terminal of said mobile phone (col. 1, lines 53-65; col. 11, lines 54-60; col. 2, lines 22-59; col. 11, line 61-col. 12, line 34; col. 12, line 42-col. 13, line 9; col. 13, line 49- col. 14, line 23)..

Art Unit: 2618

However, Kinzalow et al does not specifically disclose a calling mode conversion switch, having one end connected to said sound signal input terminal of said mobile phone and other end grounded, which switches an operating condition of said mobile phone to a calling mode or a call waiting mode; and a secret call switch for switching a sound signal input from a sound signal output terminal of the mobile phone to a mixing unit of said stereophonic apparatus or a secret call output unit.

On the other hand, Sadler, from the same field of endeavor, discloses a mobile radiotelephone system that includes a hands free kit, which allows the audio signal to be output through a car stereo system. The mobile radiotelephone system includes a hand held unit, a cassette adapter, and a coupling unit. The hand held unit is a fully functional mobile telephone including a receiver and transmitter capable of transmitting and receiving voice and data signals. The cassette adapter is configured to load into a cassette player of a car stereo system. The cassette adapter includes a record head for contacting a playback head in the cassette player when the cassette adapter is loaded into the cassette player. A coupling unit attached to the hand held unit and includes a coupling circuit for electrical connecting the cassette adapter to the hand held unit. When the cassette adapter is coupled to the hand held unit, audio signals are output from hand held unit to the cassette adapter and picked up by the cassette player (col. 1, lines 45-64; col. 3, lines 24-65; col. 5, lines 10-43). Furthermore, the coupling circuit electrically connects the cassette adapter and external microphone to the mobile unit. The coupling circuit includes an input amplifier to amplify the input from the external microphone, an output amplifier to amplify the output from the mobile unit, and a detection circuit to detect when the cassette adapter is connected to the coupling circuit. An audio device, such as CD player may be plugged into the

Art Unit: 2618

auxiliary input. The audio output signal from the audio processing circuit is directed by switch to either the internal speaker in the mobile unit or to the coupling unit via connector. The switch selects the source of the audio input signals to the audio processing circuit. The switch also selects between the internal microphone in the mobile unit and the external microphone attached to the coupling unit. In addition, the cradle adapter would include a switching circuit to select the audio signal, which is output through jack to the cassette adapter (col. 4, lines 4-20; col. 6, lines 7-40). It is considered that the audio signal which includes a radio receiving unit which converts radio signals to audio signal and a media playing unit which generates audio signal by playing media. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to apply the technique of Sadler to the communication system of Kinzalow in order to provide a separate amplifier and speaker as part of the hands-free kit and a cassette adapter that allows audio signals to be output via a car stereo system.

Regarding claim 19, Kinzalow et al as modified discloses an apparatus for controlling sound signal (figs. 7-10), coupled to a stereophonic apparatus and a mobile phone (312 of fig. 7), wherein said microphone unit comprises; a resistor having one end connected to said sound signal input terminal of said mobile phone; and a microphone having one end connected in series to said resistor and the other end grounded, and converting a voice signal into a sound signal (col. 5, lines 15-49; col. 7, line 46-col. 8, line 26).

Regarding claim 20, Kinzalow et al as modified discloses an apparatus for controlling sound signal (figs. 7-10), coupled to a stereophonic apparatus and a mobile phone (312 of fig. 7), wherein said resistor is a variable resistor (col. 8, lines 21-47).

Art Unit: 2618

Regarding claim 21, Kinzalow et al as modified discloses an apparatus for controlling sound signal (figs. 7-10), coupled to a stereophonic apparatus and a mobile phone (312 of fig. 7), wherein said microphone unit further comprises a diode of which anode is connected in series to said one end of said resistor and cathode is connected in series to said one end of said microphone (col. 7, line 59- col. 8, line 36).

Regarding claim 22, Kinzalow et al as modified discloses an apparatus for controlling sound signal (figs. 7-10), coupled to a stereophonic apparatus and a mobile phone (312 of fig. 7), wherein said microphone unit further comprises a diode of which anode is connected to said sound signal input terminal of said mobile phone and cathode is connected to said one end of said resistor (col. 8, lines 21-63).

### ***Allowable Subject Matter***

3. Claims 5-16, 23-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.



Art Unit: 2618

Hahn et al discloses a wireless headset system for use with mobile phones, and which incorporates a wireless headset, which communicates with a base station via magnetic inductive coupling or radio frequency signals.

Chen discloses a universal hand-free system for use with various types of cellular phones is designed to operate in combination with a vehicle's audio stereo system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marceau Milord whose telephone number is 571-272-7853. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on 571-272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MARCEAU MILORD

Marceau Milord  
Primary Examiner  
Art Unit 2618

  
MARCEAU MILORD  
PRIMARY EXAMINER

Application/Control Number: 10/659,750

Page 9

Art Unit: 2618